



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,961	12/03/2003	Eric C. Erike	TRW(VSSIM)5875-1	4365
26294	7590	04/27/2006		
TAROLLI, SUNDHEIM, COVELL & TUMMINO L.L.P. 1300 EAST NINTH STREET, SUITE 1700 CLEVEVLAND, OH 44114				
EXAMINER				
MCNELIS, KATHLEEN A				
ART UNIT		PAPER NUMBER		
1742				

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/726,961

**Applicant(s)**

ERIKE, ERIC C.

**Examiner**

Kathleen A. McNelis

**Art Unit**

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/28/2006.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **Claims Status**

Claims 1, 3, 5 and 7 remain for examination wherein claims 1, 5 and 7 are amended.

### **Terminal Disclaimer**

The terminal disclaimer filed on February 28, 2006 disclaiming the terminal portion of any patent granted on this application that would extend beyond the expiration date of application number 10/982,517 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### **Status of Previous Rejections**

The previous rejection of claims 1, 3 and 5 under 35 U.S. C. 103(a) as being unpatentable over Japanese patent 410140283 is maintained.

The previous rejection of claims 1 and 3 under 35 U.S. C. 103(a) as being unpatentable over Japanese patent 406184635 is maintained.

The previous rejection of claim 7 under 35 U.S. C. 103(a) as being unpatentable over Japanese patent 410140283 is withdrawn in view of applicants' amendment to claim 7, however, a new rejection is applied using this reference in combination with a secondary reference.

The previous provisional obviousness-type double patenting rejection is withdrawn in view of applicants' terminal disclaimer.

The previous rejections of claims 2, 4 and 6 under 35 U.S. C. 103(a) are withdrawn in view of applicants' cancellation of the claims.

### **DETAILED ACTION**

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

Art Unit: 1742

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amendment of fracture temperature from - 40°C to -100 °C does not appear to be supported by the original disclosure.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 410140283 (JP '283).

JP '283 is applied to claims 1, 3 and 5 for the reasons set forth in the August 29, 2005 office action.

Regarding the amendment of claims 1 and 5 of amending the temperature limitation of fracture from  $-40^{\circ}\text{C}$  to  $-100^{\circ}\text{C}$ , the examiner's position is that since the apparatus disclosed by JP '283 is substantially the same or similar to that disclosed in claims 1 and 3, and is made by substantially the same or similar process as that disclosed in instant claims 5 and 7, and in the absence of evidence to the contrary, the properties are expected to be substantially the same or similar to those disclosed in instant claims 1 and 5.

Regarding the amendments to claim 1 related to composition, these limitations were previously presented in canceled claim 2 and as such were addressed in the August 29, 2005 Office Action.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 410140283 (JP '283) as applied to claim 5 and further in view of the ASM Handbook, Volume 4, Heat Treating.

JP '283 is applied to claim 7 for the reasons discussed above regarding claim 5.

Further, regarding the amendment to claim 7 changing the heat treating step from "comprises" to "consists of" induction heating said tube to a temperature of about  $900^{\circ}\text{C}$  and cooling to room temperature, JP '283 discloses in claim 6 a normalizing processing or hardening and tempering, which is further disclosed in the example (0035) at  $900^{\circ}\text{C}$ .

JP '283 does not teach induction heating.

The ASM Handbook, Volume 4, Heat Treating teaches that induction heating can provide energy savings and higher heating rates than furnace heat treating methods, provides ease of

Art Unit: 1742

automation and control, reduced work space, quite and clean working conditions, suitability for integration into a production line and self monitoring capability (p. 164). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use induction heating as taught by the ASM Handbook for the heat treatment process in JP '283 to benefit from the advantages taught in the ASM Handbook.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 406184635 (JP '635).

JP '635 is applied to claims 1 and 3 for the reasons set forth in the August 29, 2005 office action.

Regarding the amendment of claim 1 amending the limitation  $-40^{\circ}\text{C}$  to  $-100^{\circ}\text{C}$ , the examiner's position is that the steel disclosed in JP '635 would meet this limitation since the composition, yield strength and low-temperature toughness limitations are closely met, and in the absence of proof to the contrary (see ¶s 11 and 12 in 8/29/2005 office action).

Regarding the amendments to claim 1 related to composition, these limitations were previously presented in canceled claim 2 and as such were addressed in the August 29, 2005 Office Action.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re*

Art Unit: 1742

*Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 3 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2 and 3 of U.S. Patent No. 6,386,583 (Erike '583) in view of Japanese Patent 410140283 (JP '283) alone or in view of the ASM Handbook.

Erike '583 claim 2 discloses a seamless tube of composition substantially the same as that in instant claim 1. In claim 3, the tube tensile strength is recited of at least about 130,000 psi, yield strength at least about 104,000 psi and elongation at break of at least about 14% as in instant claim 3.

Erike '583 does not claim that the tube yields plastically more than about 5% before fracturing at temperatures down to about - 100 °C as in the amendment to instant claim 1, nor does Erike '583 disclose a method of making the tube.

JP '283 discloses a method of making a tube of the same or similar composition, which is substantially the same or similar to the method disclosed in the instant invention as discussed above regarding claims 1, 3, and 5. JP '283 teaches that this provides a tube with high dimensional accuracy and excellent workability and is suitable for producing air bag parts requiring high strength and toughness (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of JP '283 to manufacture the steel disclosed in Erike '583 to produce a tube with high dimensional accuracy and excellent

Art Unit: 1742

workability suitable for producing air bag parts requiring high strength and toughness as taught by JP '283. Since the composition of the apparatus disclosed by Erike '583 is substantially the same as that of the instant invention, and the method of production disclosed by JP '283 is substantially the same as the claimed invention, and in the absence of evidence to the contrary, the tube produced by Erike '583 in view of JP '283 would be expected to have the same properties as the instant invention, including yielding plastically more than about 5% before fracturing at temperatures down to about  $-100^{\circ}\text{C}$

Alternatively, JP '283 does not disclose heating in an induction furnace. The ASM Handbook is applied as discussed above regarding claim 7. Since the composition of the apparatus disclosed by Erike '583 is substantially the same as that of the instant invention, and the method of production disclosed by JP '283 in view of the ASM Handbook is substantially the same as the claimed invention, and in the absence of evidence to the contrary, the tube produced by Erike '583 in view of JP '283 and the ASM Handbook would be expected to have the same properties as the instant invention, including yielding plastically more than about 5% before fracturing at temperatures down to about  $-100^{\circ}\text{C}$

### ***Response to Arguments***

Applicant's arguments filed 2/28/2006 have been fully considered but they are not persuasive.

Applicant's arguments are summarized as follows:

1. Applicants argue that support for the amendment of fracture temperature from  $-40^{\circ}\text{C}$  to  $-100^{\circ}\text{C}$  is provided on page 5 lines 13 of the specification.
2. Claims 1 and 5 are patentable over JP '283 because JP '283 does not teach or suggest the amended claimed temperature of  $-100^{\circ}\text{C}$ .



3. Heat treating by induction heating as in instant claim 7 will result in different properties than heating by other “conventional” methods and JP ‘283 does not disclose induction heating.
4. Claim 1 is patentable over JP ‘635 because JP ‘635 does not teach or suggest the amended claimed temperature of  $-100^{\circ}\text{C}$ .
5. Applicants present arguments related to the patentability of claims 5 and 7 over JP ‘635.

Examiners responses to these arguments is as follows:

1. Examiner does not find support for the amendment in the cited passage, which is related to a crash sensor.
2. While JP ‘283 does not recite that the yield is more than about 5% before fracturing at temperatures down to about  $-100^{\circ}\text{C}$ , the apparatus composition disclosed by JP ‘283 is substantially the same or similar to that disclosed in claims 1 and 3 as described in the August 29, 2005 Office Action paragraphs 3-4 and 7, and it is made by substantially the same or similar process as that disclosed in instant claims 5 and 7 as described in the August 29, 2005 Office Action paragraphs 5-6. Therefore, one of ordinary skill in the art would expect the properties to be substantially the same or similar to those disclosed in instant claim 1.
3. With regard to claim 1, 3, and 5, while these claims do not specifically recite induction heating, the rejections do rely on the properties being the same or substantially similar between the prior art and the claimed invention. Applicants have not provided sufficient evidence that heating by induction results in different properties than heating by other methods. The statement on page 21 of the specification: “It is believed that the induction furnace heats the low-carbon steel member quicker and more uniformly than a conventional fuel furnace, and that this quicker and more uniform heating provides the low-carbon steel member with its improved ductility down to  $-100^{\circ}\text{C}$ .” is not sufficient alone to support the assertion that induction heating produces a product more ductile at lower temperatures than by other means of heating. Further, the arguments of counsel cannot take the place of objective evidence to establish unexpected results (See M.P.E.P. 716.01(c) (II)). This argument is moot with regard to

claim 7, since the rejection has been withdrawn and a new rejection has been made to address the amended language of claim 7.

4. While JP '635 does not recite that the yield is more than about 5% before fracturing at temperatures down to about -100 °C, the apparatus disclosed by JP '635 is substantially the same or similar to that disclosed in claims 1 and 3 as described in the August 29, 2005 Office Action paragraphs 9-11. As stated in the August 29, 2005 Office Action paragraph 12, the claims are product by process claims and no evidence has been provided to indicate that the inventions differ in properties due to the alleged differences in processes. The arguments of counsel cannot take the place of objective evidence to establish unexpected results (See M.P.E.P. 716.01(c) (II)).
5. Arguments are moot because claims 5 and 7 have not been rejected as unpatentable over JP '635.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathleen A. McNelis whose telephone number is 571-272-3554. The examiner can normally be reached on M-F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**ROY KING**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 1700**